A Rising Threat to Research Integrity:

How IFIS Publishing Identifies and Excludes Hijacked Journals Amid the Growing Challenge of AI and Paper Mills
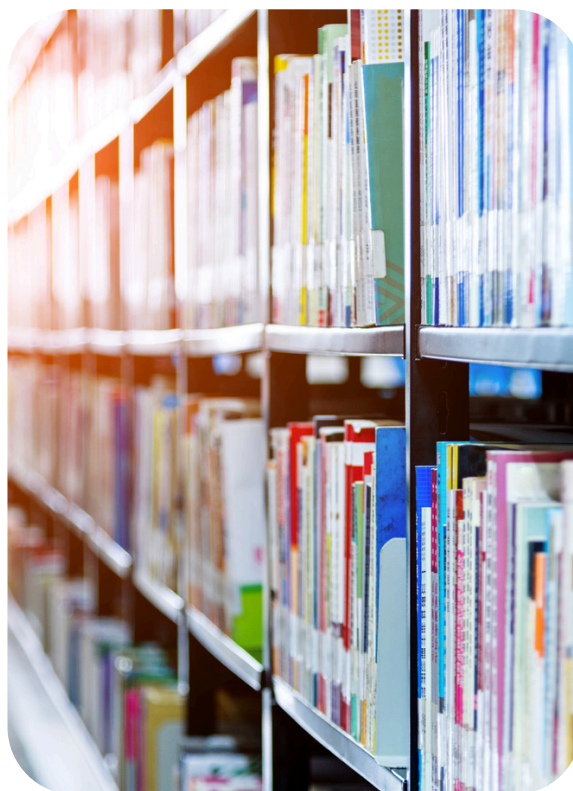
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HOW WE STOP DECEPTIVE PRACTICES: SAFEGUARDING SCHOLARLY PUBLISHING IN A CHANGING LANDSCAPE

At IFIS Publishing, we are dedicated to enhancing the discoverability of high-quality, trustworthy research in food science and related disciplines. As a not-for-profit organisation with a mission to support the global scientific community, we put trust and transparency at the heart of everything we do. Our flagship database, FSTA – the Food Science and Technology Abstracts database, includes a carefully curated selection of peer-reviewed journal articles alongside high-quality grey literature such as patents, conference proceedings, and reports.

One of the most insidious threats to research integrity today comes from fraudulent activities, including **predatory publishers**, **hijacked journals**, and the rise of **AI-generated fake research** from paper mills. These deceptive and criminal practices contaminate the scholarly record, erode trust in academic publishing, and present escalating challenges for publishers, institutions, and researchers.

At IFIS, we are committed to playing our part in meeting this challenge. The following case study will give you insight into how our editorial team identify and exclude hijacked journals from our database, ensuring the continued integrity and quality of the content we provide.

WHAT ARE PREDATORY PUBLISHERS?

Predatory publishers are exploitative entities that operate with the primary aim of generating profit, often by charging authors high fees to publish their articles without providing legitimate editorial or peer review services. These publishers typically mislead authors by presenting themselves as legitimate academic journals or conferences, preying on the desperation of researchers to get their work published.

Predatory publishers pose serious risks to authors, including:

- **Financial Loss:** Authors are charged significant publication fees without receiving legitimate editorial support or exposure.

- **Damage to Reputation:** Authors may unknowingly publish low-quality or fraudulent papers in predatory journals, which can tarnish their professional reputation.

- **Exploitation of Early Career Researchers:** Predatory publishers often target early career researchers, graduate students, and those under pressure to publish, exploiting their lack of experience in discerning credible publishers.

The scale of the predatory publishing problem is immense, with thousands of journals and conferences operating in this way globally. Efforts to quantify the full extent of the issue are ongoing, but it is clear that predatory publishers have a significant presence across multiple fields of research.

WHAT IS A HIJACKED JOURNAL?

A hijacked journal is a malicious third party's brand takeover of a legitimate academic journal. This kind of fraud is particularly dangerous because it relies on the good standing of an existing journal to deceive authors, institutions, and indexers.

The hijackers create a counterfeit version of the real journal, often using a deceptively similar website, a slightly altered domain name, or even cloned ISSNs to trick authors into submitting articles.

These fake journals then publish low-quality or fraudulent papers, sometimes for exorbitant fees, while masquerading as a reputable outlet. In some cases, legitimate journal editors and publishers may not even be aware that their title has been hijacked.

HOW PAPER MILLS AND AI UNDERMINE SCIENTIFIC INTEGRITY

Hijacked journals are an emerging threat exacerbated by the increasing involvement of paper mills—businesses that generate and sell fake or low-quality academic papers, often containing fabricated data, manipulated images, or heavily plagiarised content. These operations exploit the "publish or perish" culture, offering a shortcut for researchers to meet publication quotas or advance their careers.

AI is accelerating this problem, making it easier than ever to generate seemingly plausible but fraudulent academic papers. The ability to rapidly produce synthetic data, automate text generation, and fabricate research methodologies means that paper mills are becoming more sophisticated, making detection more challenging.

The Impact of Paper Mills on Academic Publishing
- **Integrity Threat –** Paper mills contribute to widespread research ethics violations, polluting the academic record with unreliable studies.
- **Erosion of Trust –** The presence of fraudulent papers in legitimate journals damages confidence in the peer review process and the credibility of scientific publishing.
- **Detection Challenges –** The full scale of paper mill activity is difficult to quantify, and identifying AI-generated or manipulated papers requires ongoing vigilance and advanced detection techniques.

OUR COMMITMENT TO CONSTANT VIGILANCE: DETECTING HIJACKED JOURNALS

At IFIS Publishing, we recognise that maintaining trust in scientific literature requires continuous vigilance. We do not simply assess journals once at the point of inclusion—we implement ongoing monitoring to identify red flags, detect emerging threats, and take swift action when necessary. All journal content indexed in FSTA undergoes rigorous peer review, ensuring that researchers have access to the highest-quality published studies.

Withdrawing coverage of a title and removing it from our database is not a decision we take lightly. However, when a journal's integrity is compromised, it is our responsibility to act. In this case study, we will walk through how our editorial team identified and excluded a hijacked journal—one that had undergone a malicious third-party brand takeover while still relying on the good standing of its original reputation. For legal reasons, we have anonymised the publisher and will refer to the journal as *Journal X*.

STEP 1: IDENTIFYING RED FLAGS

Our first indication that something was amiss with *Journal X* came during routine monthly indexing checks conducted by our production team. These checks ensure that content is flowing correctly into FSTA, and in this instance, they flagged multiple anomalies:

- The publishing frequency had changed from quarterly (four issues per year) to an irregular schedule of 10 issues per year, plus three additional special issues.

- Article numbers had spiked unexpectedly, with significantly more papers appearing in each issue.

- Some articles for 2025 were already live, despite it being early 2024.

While irregular, these changes alone were not definitive proof of a hijacking. However, the team continued their investigation. One of the most concerning discoveries was that, while the journal's domain name remained the same, the URL path had been subtly altered—from www.journalx.com/archives to www.journalx.com/archive. This seemingly minor change was a significant red flag, as hijacked journals often mimic the original site while making small adjustments to conceal their deception.

STEP 2: BROADENING THE INVESTIGATION

Recognising the need for a deeper analysis, the case was escalated to our editorial team for a full predatory assessment. Instead of limiting the review to articles that had been relevancy checked and ingested into FSTA, the team conducted a comprehensive examination of *Journal X*'s total output. This uncovered multiple anomalies:

- Articles on completely unrelated topics, including strategies for teaching vocabulary to ESL students and electrochemical noise from steel rebars, had been published alongside food science content.

- The journal's "Contact Us" page no longer provided a physical address, whereas the original version had included full contact details. A lack of transparency about editorial oversight and location is a common feature of hijacked journals.

- The DOIs assigned to recent articles did not resolve correctly when checked against CrossRef's DOI resolver—suggesting either manipulation or improper registration.

STEP 3: TAKING ACTION

Faced with this mounting evidence, the editorial team made the call to stop indexing *Journal X* and remove it from FSTA entirely. This decision underscores the level of detective work required to maintain the integrity of our database. Identifying a hijacked journal is not a straightforward task—it requires careful monitoring, human expertise, and intuitive judgment.

While technology assists with quality assurance, this case highlights why editorial oversight cannot be handed over to algorithms alone. Ensuring the trustworthiness of scholarly content demands vigilance, critical analysis, and human intervention.

By taking decisive action, IFIS Publishing reaffirmed its commitment to protecting the scholarly record, ensuring that researchers, librarians, and industry professionals can rely on FSTA as a source of high-quality, peer-reviewed food science research.

THE IMPORTANCE OF CONTINUOUS MONITORING

The battle against predatory publishers, hijacked journals, and AI-driven paper mills is ongoing. While publishers, institutions, and researchers work together to strengthen research integrity, bad actors continue to evolve their tactics. This is why IFIS Publishing remains committed to continuous monitoring rather than relying on a single predatory assessment at the time of journal inclusion.

Our approach includes:

- **Monthly indexing checks** to identify anomalies in journal publishing behaviour.

- **Editorial investigations** when red flags emerge, ensuring a thorough and human-led review process.

- Cross-referencing DOIs and metadata with **external verification tools** like CrossRef.

- **Assessing publishing patterns** for signs of irregular activity that may indicate hijacking or paper mill involvement.

HELPING LIBRARIANS PROTECT SCHOLARLY PUBLISHING AND SUPPORT AUTHOR AWARENESS

We will continue to evolve our strategies, leverage expert oversight, and prioritise the integrity of food science and technology literature. But we also understand this isn't something we can tackle alone. That's why we work with stakeholders including academic librarians to remain vigilant and proactive in identifying potential threats to the scholarly record.

By choosing trusted resources like FSTA, you are already investing in quality content for your institution. Additionally, IFIS offers valuable tools and resources to help authors recognise and avoid predatory practices, empowering them to protect their work and careers. We invite you to explore these resources and continue to be a champion for trustworthy, high-quality research in your community.

Please contact your FSTA Customer Relations Manager Angela Ball (**a.ball@ifis.org**) to learn more about the free resources we have to support the research community and guard against fraudulent practices in scholarly publishing.

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